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In re Application of

Application Number

07/310252

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I hereby request access under 37 CFR 1.14(a)(3)(iv) to the application file record of the above-identified ABANDONED application, which is: (CHECK ONE)

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United States Patent [19]

Queen et al.

[11] Patent Number: 5,693,762
 [45] Date of Patent: Dec. 2, 1997

[54] HUMANIZED IMMUNOGLOBULINS

[75] Inventors: Cary L. Queen, Los Altos; Man Sung Co, Cupertino; William P. Schneider, Mountain View; Nicholas F. Landolfi, Milpitas; Kathleen L. Coelingh, San Francisco; Harold E. Selick, Belmont, all of Calif.

[73] Assignee: Protein Design Labs, Inc., Mountain View, Calif.

[21] Appl. No.: 487,200

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Related U.S. Application Data

[63] Continuation of Ser. No. 634,278, Dec. 19, 1990, Pat. No. 5,530,101, which is a continuation-in-part of Ser. No. 590, 274, Sep. 28, 1990, abandoned, and Ser. No. 310,252, Feb. 13, 1989, abandoned, which is a continuation-in-part of Ser. No. 290,975, Dec. 28, 1988, abandoned.

[51] Int. CL⁶ A61K 39/395

[52] U.S. Cl. 530/387.3; 530/388.22;
424/133.1; 424/143.1

[58] Field of Search 530/387.3, 388.22;
424/133.1, 143.1

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Primary Examiner—Lila Feissee

Assistant Examiner—Julie E. Reeves

Attorney, Agent, or Firm—Townsend & Townsend & Crew

[57] ABSTRACT

Novel methods for producing, and compositions of, humanized immunoglobulins having one or more complementarity determining regions (CDR's) and possible additional amino acids from a donor immunoglobulin and a framework region from an accepting human immunoglobulin are provided. Each humanized immunoglobulin chain will usually comprise, in addition to the CDR's, amino acids from the donor immunoglobulin framework that are, e.g., capable of interacting with the CDR's to effect binding affinity, such as one or more amino acids which are immediately adjacent to a CDR in the donor immunoglobulin or those within about about 3 Å as predicted by molecular modeling. The heavy and light chains may each be designed by using any one or all of various position criteria. When combined into an intact antibody, the humanized immunoglobulins of the present invention will be substantially non-immunogenic in humans and retain substantially the same affinity as the donor immunoglobulin to the antigen, such as a protein or other compound containing an epitope.